Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

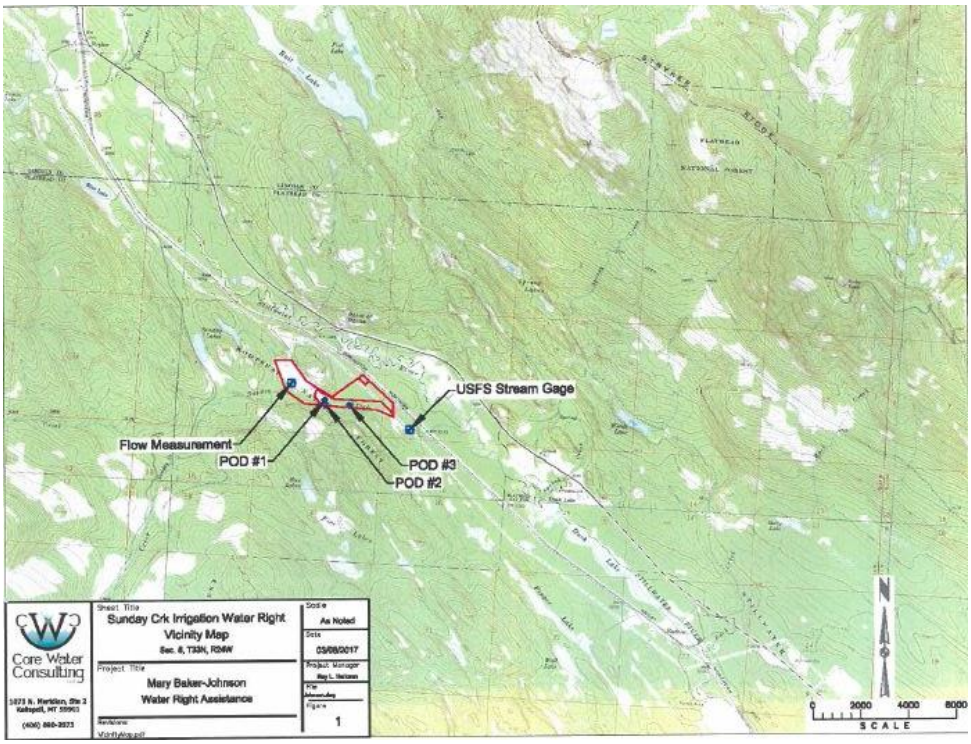
1. **Applicant/Contact name and address:**

   Mary Baker-Johnson
   PO Box 161
   Olney, MT 59927

2. **Type of action:** Surface Water Application for Beneficial Water Use Permit 76LJ 30110482

3. **Water source name**: Sunday Creek

4. **Location affected by project:** The place of use is in the SE of Section 8, Township 33N, Range 24W, Flathead County, Montana



5. **Narrative summary of the proposed project, purpose, action to be taken, and benefits:**

The Applicant proposes to pump water from Sunday Creek, April 15th - October 15th at 129 GPM up to 18.2 AF annually from three pumps. Pump #1 is in the SWNWSE, Pump #2 in the NWSWSE, and Pump #3 in the NESWSE of Section 8, Township 33N, Range 24W, Flathead County, Montana. Only 2 pumps will operate simultaneously for a maximum flow rate 129 GPM. Water will be diverted for irrigation use April 15th - October 15th. The Applicant proposes to irrigate 10.35 acres. The DNRC shall accept the change if an applicant proves the criteria in 85-2-311 MCA are met.

6. **Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)**

-U.S. Fish and Wildlife Service and Montana Natural Heritage Program: Endangered, Threatened Species and Species of Special Concern, Wetland Mapper program
-Montana Department of Fish Wildlife & Parks (DFWP); Dewatered Stream Information
-Montana Department of Environmental Quality's (MDEQ) Clean Water Act Information and PWS Drinking Water Watch databases
-U.S. Natural Resource Conservation Service (NRCS); web soil survey
-Montana Historical Society

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Applicant proposes to divert water from Sunday Creek, which is not listed by DFWP as chronically or periodically dewatered.

Determination: No impact.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Per the Montana Department of Environmental Quality's (MDEQ) Clean Water Act Information Center in 2016 Sunday Creek was not listed and therefore assumed to have insufficient data to asses any use. The Applicant is proposing to utilize water from Sunday Creek for irrigation, which is 70% efficient. 30% of the water used for irrigation will return to groundwater and/or the original source. No effect on the water quality of this source is anticipated.

Determination: No impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

This application is for surface water. A maximum of 30% of the diverted volume used for irrigation will return to groundwater and/or the original source.

Determination: No impact.

DIVERSION WORKS *- Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Water will be pumped from Sunday Creek via three pumps and into two separate irrigation systems. Pump one services the first irrigation system and diverts water to the area immediately around the house (1.9 acres). Pumps two and three are manifold and provide water two a second irrigation system that diverts water to a pasture east of the house (8.45 acres). A total of 10.35 acres will be irrigated. Only two pumps will operate simultaneously for a combined rate of 129 GPM (Pump 1 and 2 or 1 and 3). Pump one produces 28 GPM and the other two pumps can individually produce 101 GPM. The first irrigation system (POD #1) consists of a 1.0 HP Franklin Electric VersaJet Pro FVJ1C1-P pump, multiple zones of 10 Hunter PGP rotor sprinklers with Blue #3.0 nozzles and 1.25-inch or 2-inch poly pipe transmission line. Each sprinkler head is capable of 3 GPM at 45 psi or 2.7 GPM at 35 PSI. Given the total dynamic head of the system and pump curve, the pump can produce 28 GPM at approximately 38 psi, which is the equivalent of the largest zone output (10 sprinklers ×2.7 GPM). The second irrigation system consists of two manifold 7.5 HP Franklin Electric 100SR7S66-0563 pumps (POD #2 and POD #3), a 3-inch transmission main which supplies water to periodically spaced risers and a Kifco Model T210 Water Reel equipped with a Nelson S75 0.75-inch nozzle that will irrigate the field from the risers. The sprinkler is capable of 101 GPM with an inlet pressure of 80.5 psi. Given the total dynamic head of the system and pump curve, each pump can produce 101 GPM at approximately 82 psi. The proposed project shall not impact any channels, barriers, riparian areas and dams.

Determination: No impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program and DFWP websites were reviewed to determine if there are any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern", that could be impacted by the proposed project.

According to the Montana Natural Heritage Program in Township 33N, Range 24W there are six plant species of concern: Crested Shieldfern (Dryopteris cristata), Beck Water-marigold (Bidens beckii),Moonworts (Botrychium), Adder's Tongue (Ophioglossum pusillum), Whitebark Pine (Pinus albicaulis), and Pod Grass (Scheuchzeria palustris). Agriculture and human development has existed for over 20 years around this location, impact to sensitive plant species has most likely already occurred.

The Canada Lynx (Lynx Canadensis), Grizzly Bear (Ursus arctos) and Bull Trout (Salvelinus confluentus) are listed as threatened and the Townsend's Big-eared Bat (Corynorhinus townsendii), Fisher (Pekania pennanti), Common Loon (Gavia immer) and Westslope Cuthroat Trout (Oncorhynchus clarkii lewisi) are listed as sensitive by the USFS. The following are species of concern for the state of Montana: Wolverine (Gulo gulo), Hoary Bat (Lasiurus cinereus), Little Brown Myotis (Myotis lucifugus), Pileated Woodpecker (Dryocopus pileatus), Varied Thrush (Ixoreus naevius), Northern Alligator Lizard (Elgaria coerulea), and Torrent Sculpin (Cottus rhotheus). An adequate quantity of water will still exist in surface water sources to maintain existing populations of aquatic species should they exist there currently. Agriculture and human development has existed on this section of land for 20 plus years; any impacts to sensitive mammal species most likely has already occurred. No impact.

Determination: No impact.

Wetlands **-** *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: N/A, project does not involve wetlands or critical riparian habitats

Ponds **-** *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: N/A, project does not involve ponds.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Per soil survey data provided by the NRCS, soil within the place of use consists mostly of gravelly silt loam, which are well drained soils. Soils within the place of use are slightly susceptible to saline seep. The stability of the soil profile and moisture content will not be significantly altered. No degradation of soil quality shall occur.

Determination: No impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Any impacts to existing vegetation will be within the range of current disturbances due to current land use practices. Noxious weeds are not expected to be established or spread.

Determination: No impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Adverse air quality impacts from increased air pollutants are not expected as a result of this project. No air pollutants were identified as resulting from the applicants proposed use.

Determination: No impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: N/A, project is not located on state or federal land.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

All impacts to land, water and energy have been identified and no further impacts are anticipated.

Determination: No impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is located in an area with no locally adopted environmental plans.

Determination: No impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

Determination: No impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

There should be no significant negative impact on human health from this proposed use.

Determination: No impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No_x__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity? None identified.

(*b) Local and state tax base and tax revenues?* None identified.

(c) Existing land uses? None identified.

(*d) Quantity and distribution of employment?* None identified.

(e) Distribution and density of population and housing? None identified.

(f) Demands for government services? None identified.

(g) Industrial and commercial activity? None identified.

(h) Utilities? None identified.

(i) Transportation? None identified.

(j) Safety? None identified.

(k) Other appropriate social and economic circumstances? None identified.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

3. *Describe any mitigation/stipulation measures:* None identified.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No reasonable alternatives were identified in the EA.

PART III. Conclusion

1. ***Preferred Alternative:*** None identified.

2 ***Comments and Responses:*** None.

3. ***Finding:***
*Yes___ No_**x**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:

An EA is the appropriate level of analysis for the proposed action because no significant impacts were identified.

Name of person(s) responsible for preparation of EA:

Name: Melissa Brickl
Title: Hydrologist/Water Resource Specialist
Date: April 27, 2017